

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

a heating member which includes a conductive member containing a coil for, when supplied with a voltage and current of a specific frequency, producing a magnetic field of a specific magnetic field intensity and generating heat by the magnetic field supplied from the coil;

a magnetic field attenuating mechanism (shield plate 202) which is capable of attenuating the magnetic field intensity of the magnetic field passing through the mechanism; and

at least one magnetic field attenuating mechanism unit which is provided between a specific magnetic field intensity measuring point and the coil.

2. The image forming apparatus according to claim 1, wherein if the magnetic field attenuating mechanism has a thickness of  $h_1$  and includes a material whose skin depth is  $\delta_1$  and the conductive member has a thickness of  $h_2$  and includes a material whose skin depth is  $\delta_2$ , the following expression holds:

$$\frac{h_1}{\delta_1} + \frac{h_2}{\delta_2} \geq 5$$

3. The image forming apparatus according to claim 2, wherein the skin depths  $\delta_1$  and  $\delta_2$  are determined according to the frequency of the power supplied to the coil to generate a magnetic field of

the highest magnetic field intensity.

4. The image forming apparatus according to claim 1, wherein if the magnetic field attenuating mechanism has a thickness of  $h_1$  and includes a material  
5 whose skin depth is  $\delta_1$ , the following expression holds:

$$\frac{h_1}{\delta_1} \geq 5$$

5. The image forming apparatus according to claim 4, wherein the skin depth  $\delta_1$  is determined according to the frequency of the power supplied to the  
10 coil to generate a magnetic field of the highest magnetic field intensity.

6. The image forming apparatus according to claim 1, wherein the magnetic field attenuating mechanism is made of aluminum or an aluminum alloy and  
15 has a thickness of 0.1 mm or more.

7. The image forming apparatus according to claim 1, wherein the distance between the magnetic field attenuating mechanism and the coil is 80 mm or less.

20 8. An image forming apparatus comprising:  
a heating member which includes a conductive member having on its outside a coil for, when supplied with a voltage and current of a specific frequency, producing a magnetic field of a specific magnetic field  
25 intensity and generating heat by the magnetic field supplied from the coil;

a magnetic field attenuating mechanism (shield plate 202) which is capable of attenuating the magnetic field intensity of the magnetic field passing through the mechanism; and

5           at least one unit of the magnetic field attenuating mechanism which is provided between a specific magnetic field intensity measuring point and the coil.

9. The image forming apparatus according to  
10 claim 8, wherein if the magnetic field intensity attenuating mechanism has a thickness of  $h_1$  and includes a material whose skin depth is  $\delta_1$  and the conductive member has a thickness of  $h_2$  and includes a material whose skin depth is  $\delta_2$ , the following  
15 expression holds:

$$\frac{h_1}{\delta_1} + \frac{h_2}{\delta_2} \geq 5$$

10. The image forming apparatus according to claim 9, wherein the skin depths  $\delta_1$  and  $\delta_2$  are determined according to the frequency of the power  
20 supplied to the coil to generate a magnetic field of the highest magnetic field intensity.

11. The image forming apparatus according to claim 8, wherein if the magnetic field attenuating mechanism has a thickness of  $h_1$  and includes a material  
25 whose skin depth is  $\delta_1$ , the following expression holds:

$$\frac{h_1}{\delta_1} \geq 5$$

12. The image forming apparatus according to claim 11, wherein the skin depth  $\delta l$  is determined according to the frequency of the power supplied to the coil to generate a magnetic field of the highest magnetic field intensity.

13. The image forming apparatus according to claim 8, wherein the magnetic field attenuating mechanism is made of aluminum or an aluminum alloy and has a thickness of 0.1 mm or more.

14. The image forming apparatus according to claim 8, wherein the distance between the magnetic field attenuating mechanism and the coil is 80 mm or less.